

REMARKS

Claims 1, 5, 8-9, 14, 16, 25-26 and 30-32 are pending.

Claims 2-4, 6, 7, 10-13, 15, 17-24 and 27-29 have been canceled.

Claim 1 has been amended to recite the subject matter of page 11, line 21 to page 12, line 24. New claim 32 is similar to amended claim 1 except that the last "wherein" clause is in the product-by-process format.

Claims 30 and 31 have been amended for clarification.

No new matter has been added by way of the above-amendment.

The following sections correspond with the sections of the outstanding Office Action.

[I] Issues under 35 U.S.C. § 112, Second Paragraph

Claims 27 and 30-31 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Applicants respectfully traverse the rejection.

The Examiner will note that claim 27 has been canceled thereby rendering this rejection moot to the extent it applies to claim 27.

With respect to claims 30 and 31, the Examiner objects to the fact that these claims refer to a "passive layer" which is not recited in claim 1 (both claims 30-31 depend from claim 1). In response, both claims 30 and 31 have been amended so as not to recite the term "passive layer."

Based on the foregoing, Applicants respectfully submit that the claims, as currently amended, particularly point out and distinctly claim the invention. As such, withdrawal of the rejection under 35 U.S.C. § 112, second paragraph is respectfully requested.

[II] Prior Art Based Issues

The following prior art based rejections are pending:

- A. Claims 1, 5, 14, 16, 25-27 and 30-31 are rejected under 35 U.S.C. § 102(e) as being anticipated by Araki et al. 2003/0194564;
- B. Claims 1, 5, 8-9, 14, 16, 25-27 and 30-31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Daio et al. 5156930 in view of Araki et al.;
- C. Claims 1, 5, 8-9, 14, 16, 25-27 and 30-31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the European publication EP 0895296 (hereinafter "EP '296") in view of Araki et al.; and
- D. Claims 1, 5, 8-9, 14, 16 and 25-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the JP 11-086808 (hereinafter "JP '808") in view of Araki et al.

Applicants respectfully traverse Rejections (A), (B), (C) and (D).

[II-A] Araki et al.

Applicants respectfully submit that Araki et al. is improperly cited, because the US Patent Application No. 2003/0194564 has no 102(e) date for at least two reasons. First, the Examiner will note that US Patent Application No. 2003/0194564 is based on PCT/JP96/03576 which was published in Japanese. Only published patent applications which are based on International Applications published in English will be given a 102(e) date. Second, PCT/JP96/03576 was filed before November 29, 2000. Only published patent applications which are based on International Applications filed on or after November 29, 2000 will be given a 102(e) date. Accordingly, Rejections (A), (B), (C) and (D) are rendered **moot**, because each are based on Araki et al. US Patent Application No. 2003/0194564 which published October 16, 2003 which is after the effective US filing date of the instant application - August 25, 2000. The Examiner is invited to consult MPEP 706.02(f)(1).

Despite this fact, Applicants firmly believe that the instant invention is patentably distinct from the disclosure of Araki et al. (including such related publications as WO97/21779 published on June 19, 1997).

Araki et al disclose an adhesive film of fluorine-containing resin exhibiting superior adhesion onto, in particular, metals and glass. The Examiner rejects the present invention, alleging that Araki et al disclose a laminate article formed by laminating an adhesive resin layer onto metal layer and therein are taught that a metal substrate may be subjected to a chemical conversion treatment with acid for enhancing adhesive property and that a carboxyl group is suggested as a functional group for modifying the adhesive resin.

Without agreeing with the Examiner's characterization of the teachings of Araki et al., in order to further distinguish the present invention from Araki et al., Applicants have amended claim 1 to recite specific adhesive resins which are not fluorinated. It is to be pointed out that it is clearly taught in Araki et al that the adhesive resin to be used is a fluorine-containing ethylenic polymer having a hydroxyl group prepared by copolymerizing 0.05 – 30 mole % of fluorine-containing monomer(s) having hydroxyl group and 70 – 99.95 mole % of fluorine-containing monomer(s). A polymer having fluorine atoms bonded thereto is known in general to have less adherent property, though it exhibits excellent thermal stability, chemical resistance and resistance to moisture, as given in sections [0002] to [0005] of Araki et al. Thus, the invention of Araki et al is aimed at the discovery of new ways to cause a fluorine-containing polymer to possess better adherent activity to materials, such as metals and glass. The solution of Araki et al is based on the use of a fluorine-containing polymer having a hydroxyl substituent group.

In contrast thereto, the present invention was made for the purpose of providing a sealing means for sealing electrodes and/or electrolyte of a battery against the external environment with durable reliability. The solution by the present invention is based on the use of a laminate composed of a layer of adhesive resin of carboxyl group-modified polyolefin; an inert protective layer of reaction product of the metal surface with an acid; and a metal layer. In the laminate of the present invention, an excellent sealing performance is realized by the adhesion of the adhesive resin layer onto the metal layer intermediated by the inert protective layer.

Due to the difference in the inventive purpose between Araki et al and the present invention, the two are clearly distinguished from each other in the essential inventive features constructing the invention and in the inventive effects, so that no motivation for anticipating or rendering obvious the present invention from the teachings of Araki et al for a person skilled in the art can be seen.

Notwithstanding the Examiner's statement that Araki et al mention to a carboxyl group as a functional group, it is to be pointed out that Araki et al also state in section [0016] that "an adhesive comprising such a fluorine-containing polymer, in which a sulfonic acid group or carbonic acid group is introduced, has insufficient adhesive property to metal...". Furthermore, Araki et al state in section [0077] that "as compared with a fluorine-containing polymer having other functional group, such as carboxyl or even a fluorine-containing ethylenic polymer having hydroxyl and prepared by copolymerizing a non-fluorine-containing monomer having hydroxyl, the fluorine-containing polymer of the present invention is excellent in thermal resistance and large adhesive force can be obtained." Thus, it is impossible for a person skilled in the art to arrive at the present invention from the teachings of Araki et al. absent improper hindsight reasoning.

Accordingly, clear patentable distinctions exist between the present invention and the teachings of Araki et al.

[II-B] Daio et al.

In Rejection (B), the Examiner cites Daio et al. for the notion that the combination of Daio et al. (hereinafter "Daio") and Araki et al. render claims 1, 5, 8-9, 14, 16, 25-27 and 30-31 unpatentable under 35 U.S.C. § 103(a). Applicants respectfully disagree.

Daio teaches a special battery, in which a "valve means" composed of three-layer laminate of non-adhesive resin layer/metal layer/adhesive resin layer is disposed on a "sealing plate". In Daio, no description of the function of "valve means" is disclosed. By thorough

examination of Daio, this valve means does not have any relevance to the laminate for sealing electrolyte or protecting electrode according to the present invention composed of metal layer/inert protective layer/adhesive resin layer nor does it have any relevance to the disclosure of Araki et al. The description in Araki et al. mentions many uses, however, none of the potential uses include a "valve means" for a battery such as disclosed in Daio.

MPEP 2143.01 makes it clear that the obviousness analysis concerning a combination of references must take into account whether the skilled artisan would be motivated to look to the secondary reference(s) to modify the primary reference. An example of such an issue was decided in *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In *In re Jones*, the claimed invention was the 2-(2'-aminoethoxy) ethanol salt of dicamba, a compound with herbicidal activity. The primary reference disclosed *inter alia* the substituted ammonium salts of dicamba as herbicides, however the reference did not specifically teach the claimed salt. Secondary references teaching the amine portion of the salt were directed to shampoo additives and a byproduct of the production of morpholine. The court found there was no suggestion to combine these references to arrive at the claimed invention.

Similar to the findings in *In re Jones*, the skilled artisan would not look to the teachings of Araki et al. to modify the valve means of Daio, since Araki et al. do not state that the laminate could be used as a valve means in a battery.

Furthermore, the laminate of Araki et al. requires a fluorinated polymer for the laminate to provide thermal resistance, chemical resistance, etc. Accordingly, modifying the laminate of Araki et al. to use a non-fluorinated polymer would render the laminate of Araki et al. inoperative for its intended use. According to the MPEP 2143.01, "[i]f proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no ... motivation to make the proposed modification."

The Examiner judges that the laminate for sealing electrolyte or protecting electrode according to the present invention would be obvious to a person skilled in the art from the teachings of Daio in combination with Araki et al. However, there is no motivation for combining the teachings of Daio and of Araki et al for a person skilled in the art to find the present invention obvious, as explained above, even disregarding the fact that Araki et al teach a laminate which has nothing to do with the laminate according to the present invention.

In view of the foregoing, significant patentable distinctions exist between the combined teachings of Daio and Araki et al. and the present invention.

III-C) EP '296

In Rejection (C), the Examiner cites EP '296 for the notion that the combination of EP '296 and Araki et al. render claims 1, 5, 8-9, 14, 16, 25-27 and 30-31 unpatentable under 35 U.S.C. § 103(a). Applicants respectfully disagree.

EP '296 teaches a battery casing of three-layer laminate, in which the laminate of a structure of metal layer/adhesive resin layer/resin layer is disclosed. This laminate structure does not correspond to that of the laminate according to the present invention, since the laminate according to the present invention has a structure of metal layer/inert protective layer/adhesive resin layer. The Examiner judges that the laminate of the present invention is obvious from EP' 296 in combination with Araki et al. However, such a judgment is undue, since the EP'296 laminate is quite different from that of the present invention in the structure, as given above, and Araki et al teach a laminate quite irrelevant to the laminate of the present invention, as discussed above.

The Examiner is aware that EP '296 fails to teach or suggest an inert protective layer and acid/oxidative treatment, as is recited in the presently claimed invention. For this feature, the Examiner cites Araki et al. However, the artisan would not be motivated to look to Araki et al. to modify the seal of the non-aqueous electrolyte cell of EP '296. The description in Araki et

al. mentions many uses, however, none of the potential uses include a seal of the non-aqueous electrolyte cell such as disclosed in EP '296.

As mentioned above, MPEP 2143.01 makes it clear that the obviousness analysis concerning a combination of references must take into account whether the skilled artisan would be motivated to look to the secondary reference(s) to modify the primary reference. Herein, the skilled artisan would not look to the teachings of Araki et al. to modify the seal of EP '296, since Araki et al. do not state that the laminate could be used as a seal of the non-aqueous electrolyte cell such as disclosed in EP '296.

Furthermore, the laminate of Araki et al. requires a fluorinated polymer for the laminate to provide thermal resistance, chemical resistance, etc. Accordingly, modifying the laminate of Araki et al. to use a non-fluorinated polymer would render the laminate of Araki et al. inoperative for its intended use. According to the MPEP 2143.01, “[i]f proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no ... motivation to make the proposed modification.”

In view of the foregoing, significant patentable distinctions exist between the combined teachings of EP '296 and Araki et al. and the present invention.

[II-D] JP'808

In Rejection (D), the Examiner cites JP'808 for the notion that the combination of JP '808 and Araki et al. render claims 1, 5, 8-9, 14, 16 and 25-27 unpatentable under 35 U.S.C. § 103(a). Applicants respectfully disagree.

JP'808 teaches a sealing bag for non-aqueous electrolyte battery, which bag is made of a laminate of a structure of metal layer/plastic resin layer, as different from that of the present invention mentioned above. The Examiner judges that the laminate of the present invention would be obvious to a person skilled in the art from JP' 808 in combination with Araki et al.

However, such a judgment is untenable, since the JP' 808 laminate is quite different from that of the present invention in structure and Araki et al teach a laminate quite irrelevant to the laminate of the present invention, as discussed above.

The Examiner is aware that JP'808 fails to teach or suggest an inert protective layer and acid/oxidative treatment, as is recited in the presently claimed invention. For this feature, the Examiner cites Araki et al. However, the artisan would not be motivated to look to Araki et al. to modify the sealing bag for non-aqueous electrolyte battery of JP '808. The description in Araki et al. mentions many uses, however, none of the potential uses include a sealing bag for non-aqueous electrolyte battery such as the one of JP '808.

As mentioned above, MPEP 2143.01 makes it clear that the obviousness analysis concerning a combination of references must take into account whether the skilled artisan would be motivated to look to the secondary reference(s) to modify the primary reference. Herein, the skilled artisan would not look to the teachings of Araki et al. to modify the sealing bag for non-aqueous electrolyte battery of JP '808, since Araki et al. do not state that the laminate could be used as a sealing bag for non-aqueous electrolyte battery such as the one of JP '808.

Furthermore, the laminate of Araki et al. require a fluorinated polymer for the laminate to provide thermal resistance, chemical resistance, etc. Accordingly, modifying the laminate of Araki et al. to use a non-fluorinated polymer would render the laminate of Araki et al. inoperative for its intended use. According to the MPEP 2143.01, "[i]f proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no ... motivation to make the proposed modification."

In view of the foregoing, significant patentable distinctions exist between the combined teachings of JP '808 and Araki et al. and the present invention.

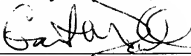
In view of the above amendment, applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Garth M. Dahlen, Ph.D., Esq. Reg. No. 43,575 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By 

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